procurement actions were kept in abeyance and materials procured have been preserved.

About 61% of the expenditure for advance procurement is towards Tarapur Atomic Power Project-3&4 on which construction work has commenced in October 1998 (after the approval of the 9th Five Year Plan outlays and revised cost estimates of TAPP-3&4 by the Government) and is being utilised for manufacture of components.

(d) No, Sir.

Report of the Atomic Energy Regulatory Board

920. SHRI RAJNATH SINGH 'SURYA':
SHRI KRISHNA KUMAR BIRLA:

Will the PRIME MINISTER be pleased to state:

(a) whether a report prepared by Atomic Energy Regulatory Board (AERB) in 1995 has listed more than hundred defects in nuclear installations about the safety aspects;

(b) if so, the main points thereof;

(c) whether Government can assure that nuclear accidents will not happen in India; and

(d) if not, then the measures taken in this regard?

THE MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY AND SPACE (SHRIMATI VASUNDHARA RAJE): (a) and (b) The question relates to a comprehensive deocument titled "Safety Issues in DAE Installations" prepared by the Atomic Energy Regulatory Board (AERB). The document detailed the evaluations and upgradations which are required in the nuclear installations of the Department of Atomic Energy (DAE) and was primarily a compilation based on the proceedings and recommendations of the various AERB Safety Committees over the past decade, as well as on reports of other safety studies carried out from time to time by the DAE and Nuclear Power Corporation of

India Ltd. (NPCIL). The document classified the requirements in terms of their safety significance and priority and listed 134 safety issues. The safety issues could be broadly classified into 4 categories:

1. Hardware related issues leading to replacement of defective components.

2. Ageing related issues — in this, elaborate studies are needed to assess the healthiness of various components as well as replacement of components which have been showing signs of deterioration.

3. The confidence building exercise which involves some analytical studies or computer based calculations to assure that the safety-of the entire reactor is not challenged.

4. The plants that have been built according to earlier safety standards will require an upgradation according to the current safety standards and this may involve an assessment and modification.

During the last three years, AERB ensured speedy implementation of action plants drawn up to resolve these issues. As on date, action plans to resolve 90 issues have been implemented. Action Plans on 23 issues are underway. It is estimated that Action plans on the remaining 21 issues will be implemented by 2001.

(c) and (d) The nuclear installations are designed, constructed, commissioned and operated after incorporating all measures required to ensure safety. These include defence-in-depth and diversity and redundancy of components and systems needed to ensure safety. The safety related design includes safe shut down system, appropriate containment to retain the radioactive release should they occur, efficient filtration to prevent releases from escaping into the environment, tall stacks to prevent release of radioactivity at ground levels and to ensure controlled releases whenever necessary. In veiw of these, nuclear accidents are highly unlikely to occur in India.